Guidelines for Conducting Adequate Yearly Progress Analyses for the 2002-2003 School Year

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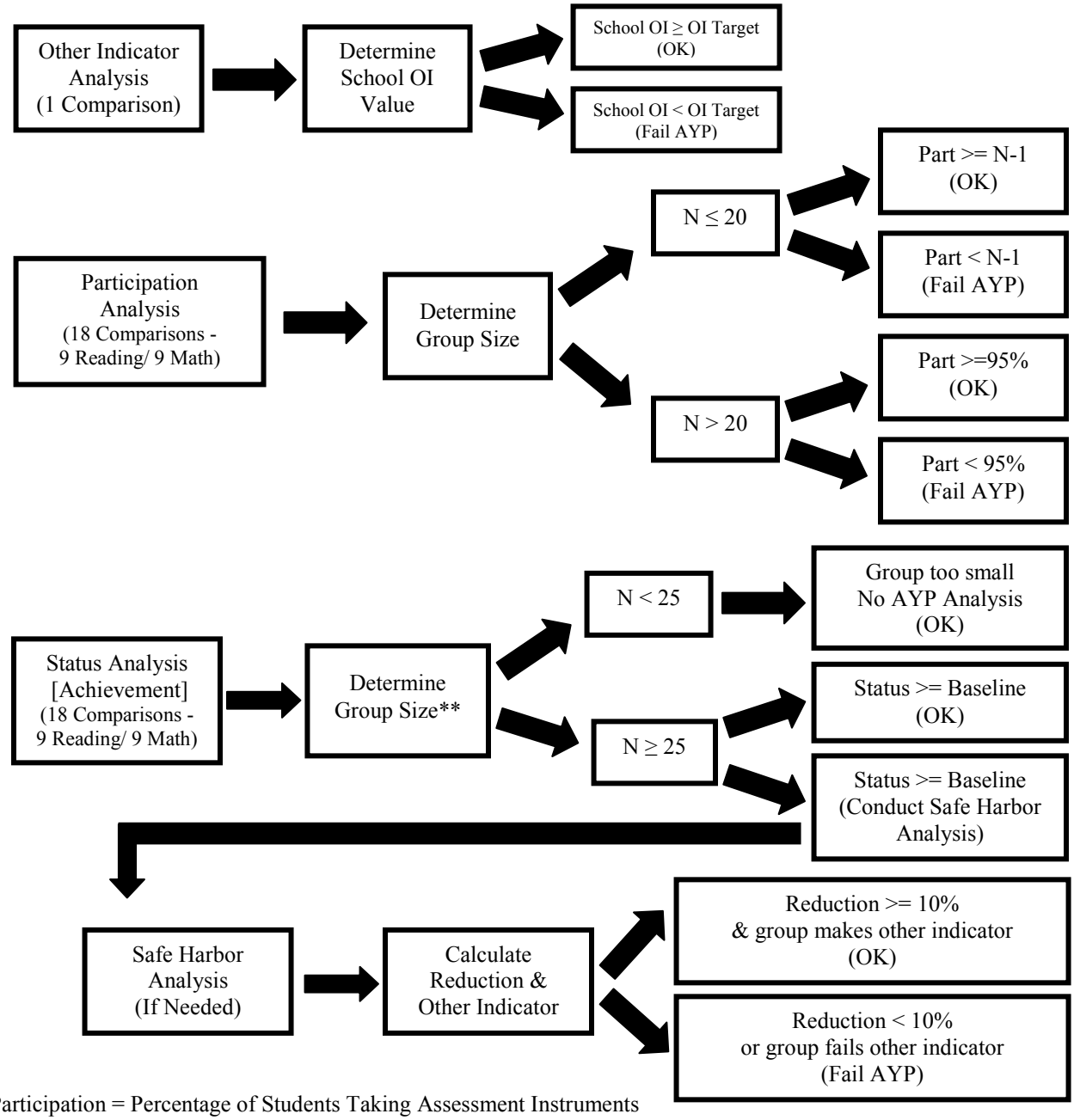
AYP Analysis Overview

Please Note: Participation and Status analyses are conducted for the entire school and 8 subgroups [5 ethnic/racial, students with an individualized education plan (IEP), students with limited English proficiency (LEP), and students who receive free or reduced lunch (FRL)] in both English Language Arts and Mathematics for a total of 36 comparisons. In addition to participation and status comparisons, the school as a whole is evaluated on the other indicator. If any one of these 37 comparisons is below the target level, the school fails AYP.



Participation = Percentage of Students Taking Assessment Instruments
Status = Percent of Students Scoring Above Proficiency Cut Score (PAC) + Confidence Interval
Reduction = % Reduction in the Percentage of Non-Proficient Students From Last Year (Year 1) + Confidence Interval

** Only subgroups may take advantage of the minimum N-size restriction; the school wide comparison must be conducted regardless of N-size.

SCHOOL AND SUBGROUP AYP TARGETS

- Elementary Schools
    - Participation Rates (n > = 20) 95%
    - Participation Rates (n < 20) n - 1
    - Other Indicator (Average Daily Attendance) 90%
    - ELA Proficiency (Status) Baseline (n >= 25) 30.0%
    - Math Proficiency (Status) Baseline (n >= 25) 36.0%

- Middle Schools
    - Participation Rates (n > = 20) 95%
    - Participation Rates (n < 20) n - 1
    - Other Indicator (Average Daily Attendance) 90%
    - ELA Proficiency (Status) Baseline (n >= 25) 37.0%
    - Math Proficiency (Status) Baseline (n >= 25) 32.0%

- High Schools
    - Participation Rates (n > = 20) 95%
    - Participation Rates (n < 20) n - 1
    - Other Indicator (Graduation Rate) 50%
    - Other Indicator (Average Daily Attendance) 90%
    - ELA Proficiency (Status) Baseline (n >= 25) 73.5%
    - Math Proficiency (Status) Baseline (n >= 25) 42.8%

Proficiency

- If a school or subgroup's proficiency rate meets or exceeds the Status Baseline Target, the Safe Harbor analysis is not performed.
- If Safe Harbor is utilized in a school or subgroup analysis, the following conditions have to be met:
    - 10% reduction in the percentage of non-proficient students when compared to the previous year, AND
    - Attainment of the target level for the Other Indicator OR an increase in the Other Indicator performance level from the previous year

Other Note

- ELA "N-Counts" that are not whole numbers are a result of the averaging N-counts from the writing and reading/language arts tests.

DATA SOURCES USED IN AYP ANALYSES

Elementary and Middle School

Year 2 (2002-2003 SY)

- 3rd and 5th grade Criterion Referenced Tests
- 4th and 7th grade ITBS (Reading Total, Language Arts Total, Mathematics Total)
- 8th grade Writing Test
- Average Daily Attendance Data from SMART (8/1/02 – 12/1/02)

Year 1 (2001-2002 SY)

[Used only for Safe Harbor growth comparison and ADA improvement]

- 3rd and 5th grade Criterion Referenced Tests
- 4th and 8th grade TerraNova (Reading Composite, Language Arts Composite, Mathematics Composite)
- Average Daily Attendance Data from SMART (2001-2002 SY)

High School

Year 2 (2002-2003 SY)

- 2003 Merged HSPE Data Set
  - April 2002 10th grade HSPE Records
  - April 2003 11th grade HSPE Records
- February 2003 Writing Test
- 2001-2002 Graduation Rates from Nevada Drop Out Report Survey
- Average Daily Attendance Data from SMART (8/1/02 – 12/1/02)

Year 1 (2001-2002 SY)

[Used only for Safe Harbor growth comparison and Other Indicator improvement]

- 2002 Merged HSPE Data Set
  - October 2001 11th grade HSPE Records
  - April 2002 11th grade HSPE Records
- February 2002 Writing Test
- 2000-2001 Graduation Rates calculated from Nevada Drop-Out Report Survey
- Average Daily Attendance Data from SMART (2001-2002 SY)

DATA CLEAN UP AND PREPARATION

The following modifications to the data sets were made in the AYP calculation process. Some variables in the original data files had to be transformed for the AYP calculations. Other variables had to be created from existing data. All newly created variables, as well as the original variables used to create such variables, are included with the data sets provided with this document.

District Numbers: All district numbers were recoded to the primary district number (1-17) for AYP accountability with the exception of charter schools. This included special education, adult, and alternative schools with district codes ranging from 21 to 37 and correctional/state programs with district codes ranging from 62 to 77. Home schooled, GED, and private school students were not included in the AYP analysis. Charter schools were assigned new district numbers (41 – Churchill Charter; 42 – Clark Charter; 56 – Washoe Charter) and will not be included in district level AYP analysis to be conducted later.

Race/Ethnicity: In most test data sets, race/ethnicity was originally contained as one variable. To make aggregations by subgroups possible, the one ethnicity variable had to be transformed into 5 separate dichotomous variables (Indian, Asian, Hispanic, Black, & White). A value of '1' in these variables indicates that a student belongs to the respective racial/ethnic group. A value of '0' indicates the student does not belong to the respective racial/ethnic group. If a student's race/ethnicity was not coded on the score sheet, the student was not included in any racial/ethnic subgroup analysis within the school. The student, however, would be included in the school-wide analysis and any special subgroup (IEP, LEP, FRL) to which he/she was coded.

High School Demographic Information: At the high school level, data sets from the first two administrations of the HSPE to a cohort of students were merged (see Data Sources for more information). Demographic coding information was taken from the most recent administration on which the student took the HSPE. For example, if a student took the HSPE on both administration dates, but his/her ethnicity, special group status, or school enrollment did not match between the two tests, information from the most recent testing was used to designate his/her belonging to appropriate groups. If a student's demographic information was missing on the second administration (e.g. ethnicity was blank), demographic information from the first administration (if available) was utilized.

Years in School: The YIS code is very important in the AYP analysis because only students who have been enrolled in a school for one year or more can be used in AYP proficiency calculations. If a student had a code of '0' in the YIS field, their assessment results are not used in calculating proficiency rates for the school or its subgroups. However, such a student is still used in calculating participation rates for the school and all of its subgroups.

The coding instructions for YIS are that a student must be continually enrolled in the school from count-day until the test date in order to receive a coding of 1 or more in YIS. Only students who withdrew and re-enrolled or were enrolled between the count-day and the test date should be coded as 0 for YIS. All students who were missing values under the YIS variable were recoded as 1.

At the elementary and middle school levels, YIS was problematic for a few schools. Some new schools (schools in their first year of operation) coded all their students as 0 for YIS. Also, in some middle schools, where enrollment begins in grade 7, virtually all students were coded as 0 for YIS on the ITBS. In cases where greater than 90% of the students were coded with a 0 for YIS, all students with the 0 coding were recoded into 1 for YIS. This only affected five schools (French Ford Middle School, Melton Elementary, Double Diamond Elementary, Mariposa Academy, High Desert Montessori).

At the high school level, YIS has not been a code on the score sheet. In order to attempt to provide high schools with the advantage of only being held accountable for students whom they have educated for a year or more, a YIS code was created. Because the federal government allowed Nevada to use cumulative pass rates on the HSPE for AYP calculations, YIS could be extrapolated from the data combined over the administrations.

A matching process was used to combine student records across the first two administrations of the HSPE math and reading tests. The department attempted to match students who did not pass math or reading on the first administration with records from the second administration using first and last names, date of birth, and student ID. For students who were found to have records from both administrations, if the schools to which they were coded on each administration did not match, the student received a code of 0 for YIS. In such cases, these students were used only in calculating participation rates for the school in which they were enrolled during their most recent testing.

Participation*:* The AYP analysis required that a new variable be created indicating participation on each subtest. These variables are dichotomous in nature (1 indicating the student participated, 0 indicating non-participation). In elementary school and middle school, students were considered to have participated if they attempted at least one item on a subtest. The item response categories were analyzed for any responses. If the student had any item response, he/she was counted as participating.

In order to analyze the Harcourt data set's item response variable for participation, all O's (blank multiple choice), 6's (blank constructed response), and 8's (omitted constructed response) were recoded into 0 (zero). In effect, this resulted in item response patterns filled with zeros for students who did not attempt any items. Such students received a 0 under participation for the appropriate subject area.

On the HSPE math and reading tests, students with a scale score of 0 were considered to have not participated. On the grade 4 and 7 NRT's, ELA participation was calculated from two subtests (Reading and Language Arts). In calculating ELA participation, 4^{th} grade reading participants were added to the 4^{th} grade language arts participants and the sum was divided by 2. The same was done for 7^{th} graders so as not to unfairly weight the 4^{th} and 7^{th} grade NRT tests more than the CRT or writing test.

All students on the 4^{th} and 7^{th} grade NRT's with a coding of LEP partial participation (LEPPRT=1) were considered to have participated on the reading and language arts subtests regardless of their item response patterns. SCAAN (DNT=0) students were also considered to have participated in reading, language arts, and mathematics regardless of their item response pattern. All students were considered to have participated in the writing test.

Proficiency: AYP Analysis required that a new variable be created indicating proficiency on each subtest. These variables are dichotomous in nature (1 indicating the student is proficient, 0 indicating non-proficiency). Students with a scaled score at or above 300 on the 3^{rd} and 5^{th} grade

CRT's were considered proficient. Scoring below 300 on the CRT's produced a non-proficient designation. On the NRT's, students with a National Percentile Rank of 51% or higher were considered proficient. At the high school level, a scale score of 290 or higher on the HSPE math test was considered proficient; a scale score of 251 or higher on the reading test was considered proficient.

In writing at the high school level, a writing total score of 7 or greater was considered proficient. The total score is calculated by adding the scores on the two writing topics. At the middle school level (8^{th} grade writing) the scores obtained in ideas, organization, voice, and conventions were added together. If the total of these four categories summed to 12 or more, the student was considered proficient.

On all tests, if a student participated using non-permissible accommodations, he/she was designated as non-proficient regardless of the test score.

AYP CALCULATIONS

Once the data files are cleaned and the new variables indicating participation and proficiency are created, data is aggregated by school and subgroups within each school to calculate other indicator, participation, and proficiency rates. A school's AYP designation is based on 37 different evaluations. Thirty-six of these evaluations are based on achievement and participation. The 37th evaluation is based on school-wide performance on the other indicator.

Other Indicator

At the elementary and middle school levels, average daily attendance is used as the other indicator. Graduation rate is used as the other indicator in high school. If the school, as a whole, fails to meet the other indicator criteria, the school fails to make Adequate Yearly progress. Subgroup performance on the other indicator is only considered when a safe harbor comparison is necessitated. In such cases, safe harbor has a combined requirement of reducing the percentage of non-proficient students by 10% or more AND meeting the other indicator criteria.

The other indicator criterion consists of either 1) meeting the target level (90% for ADA, 50% for graduation rate) OR 2) improving in performance on the other indicator since last year. If either of these conditions is met, the group meets the other indicator criteria.

Average Daily Attendance

ADA figures were obtained from the SMART database. The figures in SMART were obtained from each district's student information system through an extract process. ADA for year 2 (2002-2003 School Year) is based on attendance information from beginning of school thru December 1, 2002. Because of the reporting timelines necessitated by the No Child Left Behind Act, the other indicator values through the SMART database will only be available through December of the most current school year. However, when evaluating improvement in ADA from the previous year, ADA values from year 1 (2001-2002 School Year) is based on the full academic year.

Graduation Rate

Graduation rate was obtained from data *provided by school districts* for the annual Nevada Drop-Out and Graduation Reports. Graduation rates only consider students graduating with a regular diploma as a graduate. Students obtaining an adjusted diploma or a certificate of attendance do not count in the numerator of the graduation rate formula. The formula is as follows:

$$\text{Class of 2002 Graduation Rate} = \frac{\text{\# of standard diplomas issued for the class of 2002}}{\text{DO\_9} + \text{DO\_10} + \text{DO\_11} + \text{DO\_12} + \text{ADJ} + \text{COA} + \text{ADULT}}$$

DO_9 = # of students dropping out in 9th grade during the 1998-1999 school year
DO_10 = # of students dropping out in 10th grade during the 1999-2000 school year
DO_11 = # of students dropping out in 11th grade during the 2000-2001 school year
DO_12 = # of students dropping out in 12th grade during the 2001-2002 school year
ADJ = # of adjusted diplomas issued for the graduating Class of 2002
COA = # of certificates of attendance issued for the graduating Class of 2002
ADULT = # of Adult diplomas issued for the Class of 2002

Because of the reporting timelines, graduation rates are based on data from the previous academic year. Additionally, when a school or subgroup doesn't meet the 50% graduation rate and improvement must be evaluated, data for year 1 is based on graduation data for the class of 2001.

$$\text{Class of 2001 Graduation Rate} = \frac{\text{\# of standard diplomas issued for the class of 2001}}{\text{DO\_9} + \text{DO\_10} + \text{DO\_11} + \text{DO\_12} + \text{ADJ} + \text{COA} + \text{ADULT}}$$

DO_9 = # of students dropping out in 9th grade during the 1997-1998 school year
DO_10 = # of students dropping out in 10th grade during the 1998-1999 school year
DO_11 = # of students dropping out in 11th grade during the 1999-2000 school year
DO_12 = # of students dropping out in 12th grade during the 2000-2001 school year
ADJ = # of adjusted diplomas issued for the graduating Class of 2001
COA = # of certificates of attendance issued for the graduating Class of 2001
ADULT = # of Adult diplomas issued for the Class of 2001

At the high school level, some schools did not have graduation rate figures available. Additionally, graduation and drop-out data has not been disaggregated by subgroups such as Limited English Proficient (LEP) and Free and Reduced Lunch (FRL). In such cases where graduation rate data was unavailable, average daily attendance (ADA) from the SMART database was utilized. The same target level as elementary and middle schools (90%) was utilized at the high school level for ADA.

Participation

The following formulas were used to calculate participation for the school, the 5 ethnic groups, and the 3 special subgroups.

Elementary and Middle School ELA Participation:

$$\text{ELA Part Rate} = \frac{\text{scrptn03} + (\text{scrptn43} + \text{sclptn43} / 2) + \text{scwptn03} + (\text{scrptn73} + \text{sclptn73} / 2)}{\text{scmr\_n03} + \text{scml\_n43} + \text{scwr\_n03} + \text{scml\_n73}}$$

scrptn03 = The number of students participating on the reading portion of the 3rd and 5th grade 2003 CRT
scrptn43 = The number of students participating on any of the 4th grade reading subtests of the fall 2002 NRT (ITBS)
sclptn43 = The number of students participating on any of the 4th grade language arts subtests of the fall 2002 NRT (ITBS)
scwptn03 = The number of students participating on the 8th grade fall 2002 writing test (*All Students Participated*)
scrptn73 = The number of students participating on any of the 7th grade reading subtests of the fall 2002 NRT (ITBS)
sclptn73 = The number of students participating on any of the 7th grade language arts subtests of the fall 2002 NRT (ITBS)

scmr_n03 = The number of student records on the 3rd and 5th grade 2003 CRT
scml_n43 = The number of student records on the 4th grade fall 2002 NRT (ITBS)
scwr_n03 = The number of student records on the 8th grade fall 2002 writing test
scml_n73 = The number of student records on the 7th grade fall 2002 NRT (ITBS)

Elementary and Middle School Math Participation:

$$\text{Math Part Rate} = \frac{\text{scmptn03} + \text{scmptn43} + \text{scmptn73}}{\text{scmr\_n03} + \text{scml\_n43} + \text{scml\_n73}}$$

scmptn03 = The number of students participating on the math portion of the 3rd and 5th grade 2003 CRT
scmptn43 = The number of students participating on any of the 4th grade math subtests of the fall 2002 NRT (ITBS)
scmptn73 = The number of students participating on any of the 7th grade math subtests of the fall 2002 NRT (ITBS)

scmr_n03 = The number of student records on the 3rd and 5th grade 2003 CRT
scml_n43 = The number of student records on the 4th grade fall 2002 NRT (ITBS)
scml_n73 = The number of student records on the 7th grade fall 2002 NRT (ITBS)

High School ELA Participation:

$$\text{ELA Participation Rate} = \frac{(\text{scrptn03} + \text{scw\_n03}) / 2}{(\text{scmr\_n03} + \text{scw\_n03}) / 2}$$

scrptn03 = The number of students participating on the reading portion of either the 10th grade April 2002 HSPE or the 11th grade April 2003 HSPE.
scw_n03 = The number of students records on the 11th grade February 2003 writing test (All students were counted as participating in writing)

scmr_n03 = The number of student records in the 2003 HSPE merged data set consisting of the 10th grade April 2002 HSPE and the 11th grade April 2003 HSPE
scw_n03 = The number of students records on the 11th grade February 2003 writing test

High School Math Participation:

$$\text{Math Participation Rate} = \frac{\text{scmptn03}}{\text{scmr\_n03}}$$

scmptn03 = The number of students participating on the mathematics portion of either the 10th grade April 2002 HSPE or the 11th grade April 2003 HSPE.

scmr_n03 = The number of student records in the 2003 HSPE merged data set consisting of the 10th grade April 2002 HSPE and the 11th grade April 2003 HSPE

For all participation calculations, the group being analyzed had to have at least 95% participation to make AYP.

Small Groups (N≤20)
If the denominator of the formula above was less than or equal to 20, the group had to have all students but one participate (N-1) in order to make AYP. Therefore in cases where the denominator was less than 20, the numerator of the formula above had to be at least the value of the denominator minus 1 in order to make AYP.

Proficiency

For Proficiency calculations, only students with coding of YIS (Years in School) greater than or equal to 1 were utilized. The following formulas were used to calculate proficiency for the school, the 5 ethnic groups, and the 3 special subgroups. For subgroups with N-counts less than 25, proficiency determinations were not made. The N-count for a group is calculated using the denominator of the following PAC formulas. The terms Proficiency Rate and PAC (Percent Above Cut) are synonymous.

Elementary and Middle School ELA Proficiency (Year 2):

$$\text{ELA PAC}_{Y2} = \frac{\text{scrprn03} + (\text{scrprn43} + \text{sclprn43} / 2) + \text{scwprn03} + (\text{scrprn73} + \text{sclprn73} /2)}{\text{scmr\_n03} + \text{scml\_n43} + \text{scwr\_n03} + \text{scml\_n73}}$$

scrprn03 = The number of students proficient on the reading portion of the 3rd and 5th grade 2003 CRT
scrprn43 = The number of students proficient on the 4th grade reading total of the fall 2002 NRT (ITBS)
sclprn43 = The number of students proficient on the 4th grade language arts total of the fall 2002 NRT (ITBS)
scwprn03 = The number of students proficient on the 8th grade fall 2002 writing test
scrprn73 = The number of students proficient on the 7th grade reading total of the fall 2002 NRT (ITBS)
sclprn73 = The number of students proficient on the 7th grade language arts total of the fall 2002 NRT (ITBS)

scmr_n03 = The number of student records with YIS > 1 on the 3rd and 5th grade 2003 CRT
scml_n43 = The number of student records with YIS > 1 on the 4th grade fall 2002 NRT (ITBS)
scwr_n03 = The number of student records with YIS > 1 on the 8th grade fall 2002 writing test
scml_n73 = The number of student records with YIS > 1 on the 7th grade fall 2002 NRT (ITBS)

Elementary and Middle School Math Proficiency (Year 2):

$$\text{Math PAC}_{Y2} = \frac{\text{scmprn03} + \text{scmprn43} + \text{scmprn73}}{\text{scmr\_n03} + \text{scml\_n43} + \text{scml\_n73}}$$

scmprn03 = The number of students proficient on the math portion of the 3rd and 5th grade 2003 CRT
scmprn43 = The number of students proficient on the 4th grade math total of the fall 2002 NRT (ITBS)
scmprn73 = The number of students proficient on the 7th grade math total of the fall 2002 NRT (ITBS)

scmr_n03 = The number of student records with YIS > 1 on the 3rd and 5th grade 2003 CRT
scml_n43 = The number of student records with YIS > 1 on the 4th grade fall 2002 NRT (ITBS)
scml_n73 = The number of student records with YIS > 1 on the 7th grade fall 2002 NRT (ITBS)

High School ELA Proficiency (Year 2):

$$\text{ELA PAC}_{Y2} = \frac{(\text{scrprn03} + \text{scwprn03}) / 2}{(\text{scmr\_n03} + \text{scw\_n03}) / 2}$$

scrprn03 = The number of students proficient on the reading portion of either the 10th grade April 2002 HSPE or the 11th grade April 2003 HSPE.

scwprn03 = The number of students proficient on the 11th grade February 2003 writing test

scmr_n03 = The number of student records with YIS > 1 in the 2003 HSPE merge data set consisting of the 10th grade April 2002 HSPE and the 11th grade April 2003 HSPE

scw_n03 = The number of students records with YIS > 1 on the 11th grade February 2003 writing test

High School Math Proficiency (Year 2):

$$\text{Math PAC}_{Y2} = \frac{\text{scmprn03}}{\text{scmr\_n03}}$$

scmprn03 = The number of students proficient on the mathematics portion of either the 10th grade April 2002 HSPE or the 11th grade April 2003 HSPE.

scmr_n03 = The number of student records with YIS > 1 in the 2003 HSPE merge data set consisting of the 10th grade April 2002 HSPE and the 11th grade April 2003 HSPE

PAC Confidence Interval

A confidence interval was added to the proficiency rate for comparison to the subject area baseline target. The first step in creating the confidence interval is to calculate the standard error of the proportion. The following formula is utilized to calculate the standard error of the proportion:

$$\sigma_{Y2} = \sqrt{\frac{P \times Q}{N}}$$

P = The proficiency rate (PAC) for year 2 as calculated above
Q = 1 – the proficiency rate (PAC) for year 2
N = The denominator of the year 2 proficiency rate calculation (The # of students utilized in calculating proficiency)

Multiplying the standard error of the proportion by 1.645 yields a 95% one-tailed confidence interval. Remember, the standard error of the proportion and the corresponding confidence interval must be calculated each time a PAC analysis is conducted. A confidence interval produced using the proficiency rates in ELA **must not** be applied to the Mathematics proficiency rate.

$$95\%\ CI_{PAC\ Yr\ 2} = 1.645 \times \sigma_{Y2}$$

The 95% confidence interval is then added to the observed subject area PAC value for comparison to the established subject area baseline target. If the PAC + CI value meets or exceeds the baseline target, the respective group made AYP status for the subject area. If the value of PAC + CI falls below the baseline target, a safe harbor comparison is considered.

If PAC + $95\%\ CI_{PAC\ Yr\ 2}$ ≥ Baseline Target → Group makes AYP in subject area achievement

If PAC + $95\%\ CI_{PAC\ Yr\ 2}$ < Baseline Target → Conduct Safe Harbor Calculations

The subject area baseline targets are as follows:

Elementary ELA Baseline Target = 30.0%
Elementary Math Baseline Target = 36.0%
Middle School ELA Baseline Target = 37.0%
Middle School Math Baseline Target= 32.0%
High School ELA Baseline Target= 73.5%
High School Math Baseline Target = 42.8%

Safe Harbor Calculations

If the sum of a school or subgroup's proficiency rate and confidence interval falls below the subject area baseline target, a safe harbor comparison is conducted. In order to make safe harbor, a subgroup must demonstrate a 10% reduction in the percentage of non-proficient students from the previous year and the respective subgroup must meet the other indicator criteria. Average Daily Attendance from the SMART database is used as the other indicator in elementary and middle school; Graduation Rate is used as the other indicator in high school. If Graduation Rate is not available for a school or a subgroup, ADA from the SMART database was used instead.

In order to make safe harbor comparisons, the percent reduction of non proficient students from the previous year must be calculated. The first step in calculating the reduction of non-proficient students is to calculate the ELA and Math proficiency rates (PAC – Percent Above Cut) for the previous year (2001-2002 school year). Again, only students with a YIS value of 1 or more were utilized in the calculations.

Elementary and Middle School ELA Proficiency (Year 1):

$$\text{ELA PAC}_{Y1} = \frac{\text{scrprn03} + (\text{scrprn42} + \text{sclprn42} / 2) + (\text{scrprn82} + \text{sclprn82} /2)}{\text{scmr\_n02} + \text{scml\_n42} + \text{scml\_n82}}$$

scrprn02 = The number of students proficient on the reading portion of the 3rd and 5th grade 2002 CRT
scrprn42 = The number of students proficient on the 4th grade reading composite of the fall 2001 NRT (TerraNova)
sclprn42 = The number of students proficient on the 4th grade language arts composite of the fall 2001 NRT (TerraNova)
scrprn82 = The number of students proficient on the 8th grade reading composite of the fall 2001 NRT (TerraNova)
sclprn82 = The number of students proficient on the 8th grade language arts composite of the fall 2001 NRT (TerraNova)

scmr_n02 = The number of student records on the 3rd and 5th grade 2002 CRT
scml_n42 = The number of student records on the 4th grade fall 2001 NRT (TerraNova)
scml_n82 = The number of student records on the 8th grade fall 2001 NRT (TerraNova)

Elementary and Middle School Math Proficiency (Year 1):

$$\text{Math PAC}_{Y1} = \frac{\text{scmprn02} + \text{scmprn42} + \text{scmprn82}}{\text{scmr\_n02} + \text{scml\_n42} + \text{scml\_n82}}$$

scmprn02 = The number of students proficient on the math portion of the 3rd and 5th grade 2002 CRT
scmprn42 = The number of students proficient on the 4th grade math composite of the fall 2001 NRT (TerraNova)
scmprn82 = The number of students proficient on the 8th grade math composite of the fall 2001 NRT (TerraNova)

scmr_n02 = The number of student records on the 3rd and 5th grade 2002 CRT
scml_n42 = The number of student records on the 4th grade fall 2001 NRT (TerraNova)
scml_n82 = The number of student records on the 8th grade fall 2001 NRT (TerraNova)

High School ELA Proficiency (Year 1):

$$\text{ELA PAC}_{Y1} = \frac{(\text{scrprn02} + \text{scwprn02}) / 2}{(\text{scmr\_n02} + \text{scw\_n02}) / 2}$$

scrprn02 = The number of students proficient on the reading portion of either the 11th grade October 2001 HSPE or the 11th grade April 2002 HSPE.

scwprn02 = The number of students proficient on the 11th grade February 2002 writing test

scmr_n02 = The number of student records with YIS > 1 in the 2002 HSPE merge data set consisting of the 11th grade October 2001 HSPE and the 11th grade April 2002 HSPE

scw_n02 = The number of students records with YIS > 1 on the 11th grade February 2002 writing test

High School Math Proficiency (Year12):

$$\text{Math PAC}_{Y1} = \frac{\text{scmprn02}}{\text{scmr\_n02}}$$

scmprn02 = The number of students proficient on the mathematics portion of either the 11th grade October 2001 HSPE or the 11th grade April 2002 HSPE

scmr_n02 = The number of student records with YIS > 1 in the 2002 HSPE merge data set consisting of the 11th grade October 2001 HSPE and the 11th grade April 2002 HSPE

Once again, the standard error of the proportion for year 1 is calculated using the same formula. **BE SURE TO NOTE**, calculating the standard error of the proportion for year 1 is used only to derive the standard error of the difference in proportions utilized by the 10% reduction calculation below. It **SHOULD NOT** be used to adjust the PAC value for year 1.

$$\sigma_{Y1} = \sqrt{\frac{P \times Q}{N}}$$

P = The proficiency rate for year 1 as calculated above

Q = 1 – the proficiency rate for year 1

N = The denominator of the year 1 proficiency rate calculation (The # of students utilized in calculating proficiency)

The next step in making the safe harbor comparison involves calculating the percent reduction in non-proficient students. To do this, the following formula is utilized.

$$\Delta_{non\text{-}proficient} = 1 - \left(\frac{(1 - \text{PAC for Year 2})}{(1 - \text{PAC for Year 1})} \right)$$

Be sure to note, 1 – the proficiency rate for either year is actually the proportion of non-proficient students. Also, the PAC values for years 1 and 2 are unadjusted values. PAC for Year 2 should not include the 95% confidence interval applied earlier when making the comparison to the subject area baseline target. A different confidence interval is applied (e.g. the standard error of the difference in proportions) for calculating the percent reduction in the number of non-proficient students.

If the sum of the $\Delta_{non\text{-}proficient}$ calculation is zero or a negative value, the safe harbor comparison is not made and no further calculations are required. School and subgroups *must* demonstrate some reduction in the percentage of non-proficient students to utilize the confidence interval in safe harbor.

Safe Harbor Confidence Interval

The confidence interval utilized to analyze the reduction in non-proficient students takes advantage of the standard error of the proportion. A 75% confidence interval is created using the standard error of the difference in proportions. The formula for the standard error of the difference in proportions is:

$$\sigma_{Difference\ in\ Proportions} = \sqrt{(\sigma_{Y2})^2 + (\sigma_{Y1})^2}$$

Multiplying the standard error of the difference in proportions by .675 yields a 75% confidence interval. The formula for the 75% confidence interval for change is:

$$75\%\ CI_{\Delta} = \mathbf{.675} \times \sigma_{\text{Difference in Proportions}}$$

The 75% confidence interval is then added to the percent reduction of non-proficient students. If this value is greater than or equal to 10%, the first criteria for safe harbor has been met and the other indicator must be evaluated. If the value is less than 10%, safe harbor is not met and the group has failed to make Adequate Yearly Progress in achievement under the respective subject area.

If $\Delta_{non\text{-}proficient} + 75\%\ CI_{\Delta} \geq 10\% \rightarrow$ Evaluate group's performance on the other indicator

If $\Delta_{non\text{-}proficient} + 75\%\ CI_{\Delta} < 10\% \rightarrow$ Group fails to make AYP subject area achievement

If the group being analyzed demonstrates a 10% reduction in the number of non-proficient students with or without the 75% confidence interval, the other indicator for the subgroup must be evaluated. For elementary and middle schools, the ADA figures from SMART are utilized as the other indicator. At the high school level, graduation rates calculated from the Nevada Drop-Out Report Survey are utilized as the other indicator. If drop-out figures are unavailable, ADA from SMART is utilized as the other indicator.

If the elementary or middle school group under evaluation has an ADA value greater than or equal to 90% or the group improves in ADA from the previous year, the other indicator criteria is met and the group makes AYP in the respective subject area.

At the high school level, if the high school group under evaluation has a graduation rate greater than or equal to 50% or demonstrates an improvement in their graduation rate from the previous year, the other indicator criteria is met and the group makes AYP in the respective subject area. If there is no graduation rate available for the high school group under evaluation, an ADA value greater than or equal to 90% or an improvement in ADA from the previous year meets the other indicator criteria.

If the other indicator value is less than the other indicator target level; is equal to or lower than the previous year's other indicator value; or is missing, the other indicator criteria is not met and the group has failed to make Adequate Yearly Progress in achievement under the respective subject area.